

AMENDMENTS TO THE CLAIMS:

1-23. (Canceled)

24. (New) A method of preparation of protein sample solution for analysis, wherein the protein sample solution contains one or more non-protein agents selected from the group consisting of an anionic detergent, a cationic detergent, a non-ionic detergent, a zwitterionic detergent, a sulfobutane, a lipid, a polysaccharide, a polyphenol, a tannin, an alkaloid, a pigment, a reducing agent, a protein denaturant, an amine, HEPES, a TRIS buffer, and a salt, wherein after the preparation of the protein sample the protein in the sample is quantitatively recovered and is without interference from the non-protein agents originally present in the sample, comprising the following steps:

(a) treating the protein sample solution with a solution that comprises an acidic agent and a salt that precipitates the detergents selected from the group consisting of sodium salt, potassium salt, calcium salt, magnesium salt, and guanidine salt so to precipitate the protein;

(b) centrifuging the precipitated protein sample solution to form a tight protein pellet at the bottom of the tube, removing and discarding the supernatant and collecting said protein pellet;

(c) suspending said protein pellet in at least one medium selected from a group consisting of a mixture of aqueous-organic solvent and an organic solvent;

(d) centrifuging said suspended protein and collecting a washed protein pellet;
and

(e) solubilizing the washed protein pellet in a protein pellet solubilization buffer, wherein the solubilization buffer is provided with an acid neutralizing agent in a sufficient amount to substantially neutralize the acid captured in the protein pellet to facilitate a desired protein solubilization.

25. (New) The method according to claim 24, wherein the protein sample solution contains the ionic detergent, sodium dodecyl sulfate.

26. (New) The method according to claim 25, wherein the salt that precipitates the detergent is an amount effective to precipitate the sodium dodecyl sulfate present in the protein solution.

27. (New) The method according to claim 24, wherein the organic solvent is selected from the group consisting of an acetone and an alcohol.

28. (New) The method of claim 24, further comprising suspending the protein pellet of the step (b) in an aqueous medium prior to suspension in the aqueous-organic solvent or organic solvent.

29. (New) The method of claim 24, further comprising mixing a polysaccharide solution with the protein pellet of step (b).

30. (New) The method according to claim 24, wherein the protein pellet solubilization buffer is provided with a pH indicator dye.

31. (New) The method of claim 24, further comprising vigorously agitating and/or grinding the protein pellet suspended in the protein pellet solubilization buffer in step (e).

32. (New) The method of claim 24, further comprising addition of an acid neutralizing agent into the protein pellet solubilization buffer to shift the pH of the suspension to favor desired protein solubilization.

33. (New) The method of claim 24, wherein the centrifugation in step (b) is repeated to remove residual supernatant.

34. (New) The method according to claim 33, wherein a second centrifugation in the step (b) is performed by placing the tube in the centrifuge in the same orientation as before.

35. (New) The method of claim 24, further comprising addition of an acid neutralizing agent to neutralize approximately or greater than 0.25 nM acid per microgram protein in the pellet to favor desired protein solubilization.

36. (New) A method of preparation of a protein sample solution for analysis, wherein the protein sample solution contains one or more non-protein agents selected from the group consisting of an anionic detergent, a cationic detergent, a non-ionic detergent, a zwitterionic detergent, a sulfobutane, a lipid, and a salt, wherein after the preparation of the protein sample, the protein in the sample is quantitatively recovered and is without interference from the non-protein agents originally present in the sample, comprising the following steps:

(a) treating the protein sample solution with a solution that comprises an acidic agent and a salt that precipitates the detergents selected from the group consisting of sodium salt, potassium salt, calcium salt, magnesium salt, and guanidine salt so as to precipitate the protein;

(b) treating the acidified protein solution with one or more precipitate-forming agents selected from the group consisting of an agent that forms a precipitate when come in contact with the acidic agent, sodium benzoate, sodium cholate, sodium deoxycholate, monovalent salts of organic acids, and salts of uric acid to precipitate the protein;

(c) centrifuging the precipitated protein sample solution to form a tight protein pellet at the bottom of the tube, removing and discarding the supernatant and collecting said protein pellet;

(d) suspending said protein pellet in at least one medium selected from the group consisting of a mixture of aqueous-organic solvent and an organic solvent to wash the protein pellet;

(e) centrifuging said suspension and collecting a washed protein pellet; and

(f) solubilizing the washed protein pellet in a protein pellet solubilization buffer, wherein the solubilization buffer is provided with an acid neutralizing agent to neutralize approximately or greater than 0.25 nM acid per micro-gram protein in the pellet to facilitate a desired protein solubilization.

37. (New) The method of claim 36, further comprising mixing a polysaccharide solution with the protein pellet of step (c).

38. (New) The method of claim 36, wherein the protein sample solution contains the ionic detergent, sodium dodecyl sulfate.

39. (New) The method of claim 38, wherein the salt that precipitates the protein is in an amount effective to precipitate the sodium dodecyl sulfate present in the protein solution.

40. (New) The method according to claim 36, wherein the protein pellet solubilization buffer is provided with a pH indicator dye.

41. (New) The method of claim 36, further comprising vigorously agitating and/or grinding the protein pellet suspended in the protein pellet solubilization reagent buffer in step(f).

42. (New) A method of total protein assay, wherein a protein sample solution contains one or more non-protein agents selected from the group consisting of an anionic detergent, a cationic detergent, a non-ionic detergent, a zwitterionic detergent, a sulfobutane, a lipid, and a salt, comprising the following steps:

(a) treating the protein sample solution with a solution that comprises an acidic agent and a salt that precipitates the detergents selected from the group consisting of sodium salt, potassium salt, calcium salt, magnesium salt, and guanidine salt so as to precipitate the protein;

(b) centrifuging the precipitated protein sample solution at least once to form a tight protein pellet at the bottom of the tube, removing and discarding the supernatant and collecting said protein pellet;

(c) suspending said protein pellet of step (b) with one or more alkaline reagent of a protein assay to produce a characteristic protein reaction; and

(d) comparing the color density of the protein color reaction with the color density of a protein color reaction of known concentration.